

Attorney Docket No.: ISPH-0751
Inventors: Dean et al.
Serial No.: 10/619,220
Filing Date: July 14, 2003
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REMARKS

Claims 78-84 are pending in the instant application. All of the claims have been rejected under 35 USC, paragraph 1 for lack of written description. Claim 1 has been amended. No new matter has been added by this amendment. Reconsideration is respectfully requested in light of the amendment and the following remarks.

I. Rejection of Claims Under 35 U.S.C. 112, paragraph 1

Claim 78-84 have been rejected under 35 U.S.C. 112, paragraph 1 for failing to comply with the written description requirement. The Examiner states that the claims contain subject matter which was not described in the specification in a way to reasonably convey to one skilled in the art that the inventors at the time of the application were in full possession of the invention.

The Examiner states that the specification does teach that administration of a single mouse antisense compound (SEQ ID NO: 73) decreases apoptosis of kidney tubular cells of a mouse afflicted with ischemia reperfusion injury. In an effort to move the prosecution of the case forward, the Applicants have amended claim 1 to recite that the Fas nucleic acid sequence comprises nucleotides 616 to 635 of SEQ ID NO:65. This is the sequence to which SEQ ID NO: 73 is targeted as shown in Table 8 of the specification. This amendment is not an admission regarding the teachings of the instant application.

The Examiner states that the demonstration of a decrease in apoptosis in a mouse afflicted with reperfusion injury of a mouse kidney is insufficient to support claims to the inhibition of reperfusion injury in a cardiac, renal, hepatic

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or skin allograft recipient. The Applicants submit that Fas is a secreted protein that results in tissue damage by forming a cross-linked product with FasL. Moreover, the Fas need not be provided by the tissue undergoint from ischemia, but instead can be provided by infiltrating inflammatory cells. Fas has been implicated in cell damage and death in cell types where Fas is expressed at very low or even undetectable levels. Therefore, the mechanism of Fas induced cell damage is independent of cell type. Therefore, the demonstration of the inhibition of ischemia reperfusion injury in a single tissue type is sufficient to predict efficacy in other tissue types.

The Examiner states that the use of antisense oligonucleotides as therapeutic agents is an uncertain art. The Applicants submit that the number of companies and individual researchers focused on the study of antisense oligonucleotides as therapeutic agents clearly demonstrates that those skilled in the art believe that they are useful as therapeutic agents. Moreover, the claims as now amended recite the use of an antisense compound that binds to a specific portion of Fas. An antisense oligonucleotide targeted to this portion of Fas has been demonstrated to inhibit tissue injury in an ischemic reperfusion model in vivo. The written description requirement does not require demonstration that a compound work for the method claimed. Instead, the specification must provide a reasonable model such that one skilled in the art would have a reasonable expectation that the claimed method would work. The extensive knowledge of those skilled in the art regarding the mechanism of action of Fas and antisense oligonucleotides provides sufficient support for the methods claimed. Therefore, the teachings of the specification demonstrate that

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the inventors were in full possession of the invention at the time of the filing of the application and the rejection is traversed.

II. Fees

It is believed that there are no fees due with this response. However, if a fee is due, the Commissioner is hereby authorized to charge Deposit Account No. 500252 referencing case number ISPH-0751.

III. Conclusion

Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited.

Respectfully submitted,



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